sugar may be, but is not restricted to, any of the following sugars: glucose, N-acetylglucosamine, galactose, N-acetylgalactose, mannose, fucose.

^bFolic acid may be used in place of the sugar residues

6a R = H

6b R =
$$\stackrel{O}{-P-N} \longrightarrow _{NH_3}^+$$

FIG. 2c

FIG. 2d

3°dT5"-CPG

Alternating couplings with 2'-OCH₃ methylphosphonate and 2'-OCH₃ phosphodiester synthons

 $^{5'}$ (2'-OMe-ApGgUpCpApGgUpCpApGgUpCpApGgU)dT* $ps^{3'\cdot 3'}$ dTpsdT $^{5'}$ -CPG

C6-Disulfide cyanoethylphosphoamidite synthon

 $\texttt{DMTO-(CH_2)_8-SS-(CH_2)_6} \\ ps^{-\frac{5}{2}} (2'-\texttt{OMe-ApGpUpCpApGpUpCpApGpUpCpApGpU}) \\ dT^* \\ ps^{3'\cdot3'} dT \\ ps dT^{5'}-\texttt{CPG}$

$\mathsf{DMTO} ext{-}(\mathsf{CH}_2)_6 - \mathsf{SS} ext{-}(\mathsf{CH}_2)_6 \cdot \mathsf{ps} ext{-}^{-5}(2 ext{-}\mathsf{OMe-ApGpUpCpApGpUpCpApGpUpCpApGpUpCpApGpU})}$

FIG. 2e

1. Genta One-pot Deprotection 2. Trityl-On Purification

 $\mathsf{HO-(CH_2)_6-SS-(CH_2)_6ps-5(2'-OMe-ApGpUpCpApGpUpCpApGpUpCpApGpUpCpApGpU)}$

50 mM DTT 10 mM sodium phosphate (pH 8)

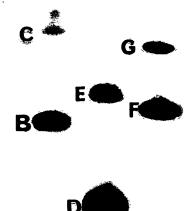
∳ HS−(CH₂)₆·p*s* ^{—5}(2'-OMe-ApGϼUpCϼApGϼUpCϼApGϼUpCϼApGϼU)dT• ps³'-³dTpsdT ⁵

1. {\gamma^32P}-ATP, PNK 2. 1-Me-Imidazole 3. EDA/EDAC ^ト᠆Sー(CH₂)₆・ps ^{–5}(2・OMe・ApGpUpCpApGpUpCpApGpUpCpApGpUjdT・ *ps³・3*ํdTpsdT 5゚— O─ ฅ ー ト ៲ ³²

where p: phosphodiester linkage p: methylphosphonate linkage ps: phosphorothioate linkage

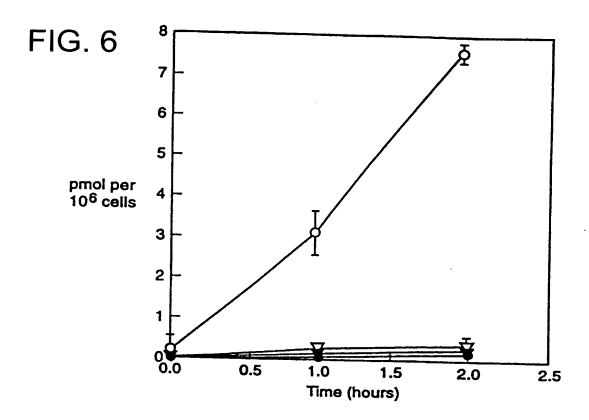
FIG. 4

1 2 3 4



XC > A

35S where is
$$-\{[^{35}S]_{-ps}^{4}A\}_{n \text{ n= 1..3}}$$



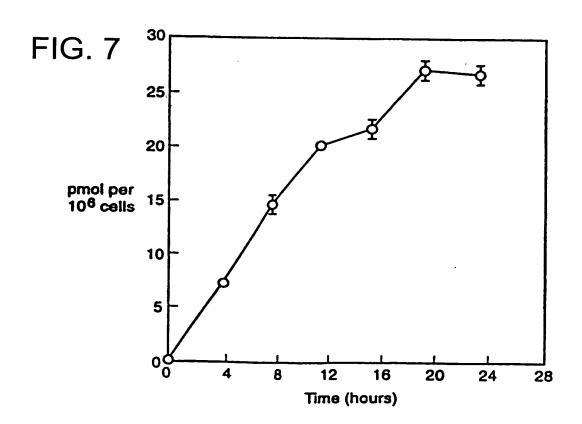
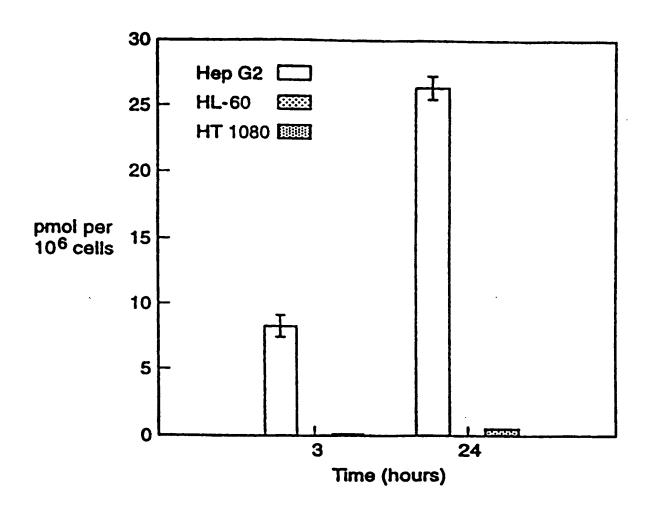


FIG. 8



NUCLEASE RESISTANT NEOGLYCOCONJUGATE UPTAKE BY HEP G2 CELLS

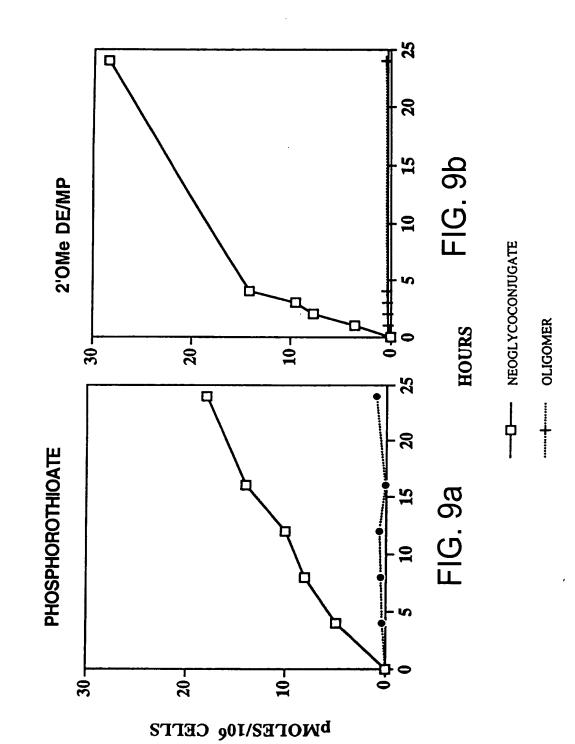
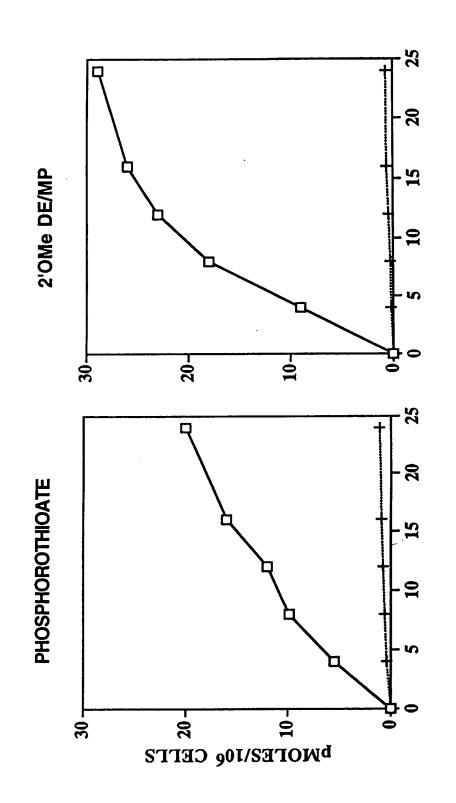


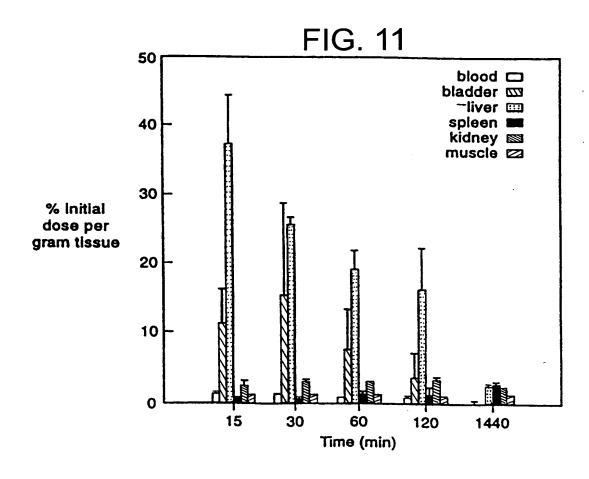
FIG. 10
NUCLEASE RESISTANT NEOGLYCONJUGATE UPTAKE
BY HEP G2 2.2.15 CELLS

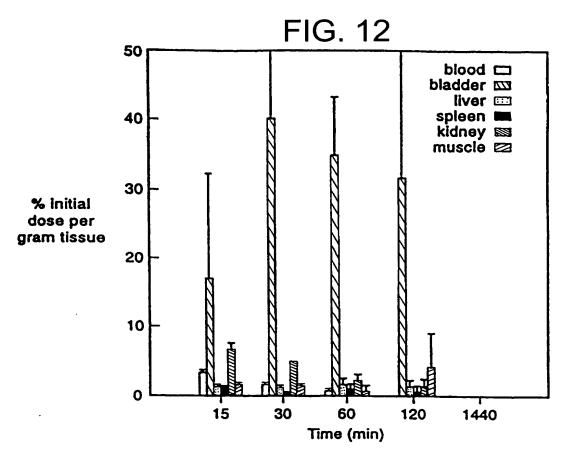


- neoglycoconjugate

HOURS

oligomer





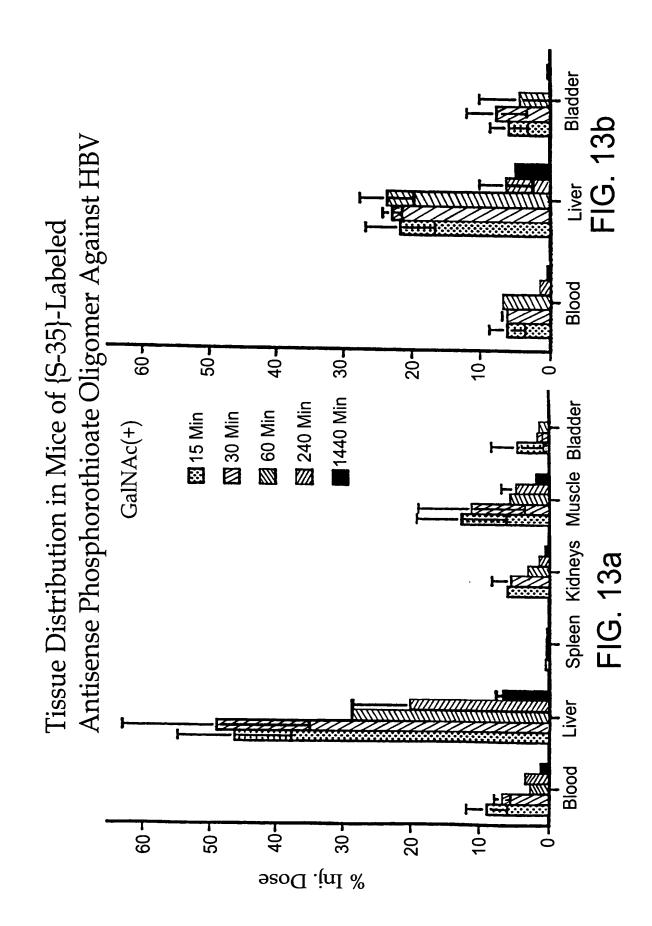


FIG. 14

1 2 3 4 5 6 7 8

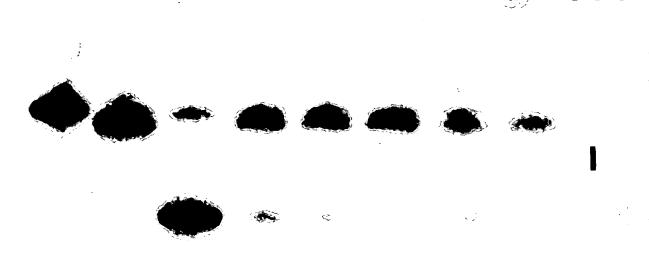
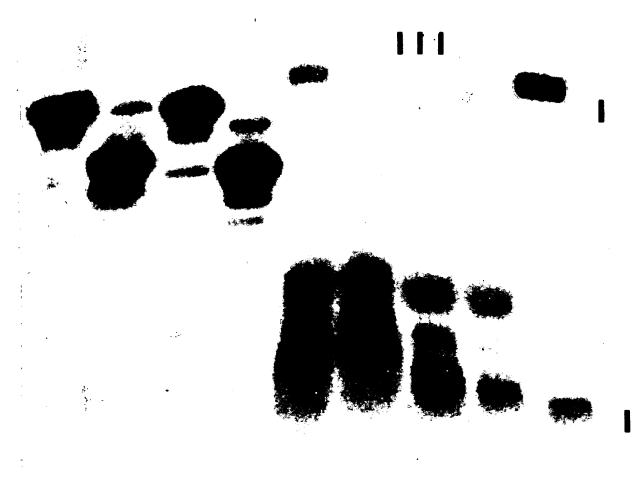


FIG. 15

1 2 3 4 5 6 7 8 9



10: YEE(ahGalNAc),-SMCC-AET-pU"pT,

11: YEE(ah),-SMCC-AET-pU"pI,

12: [Y]-SMCC-AET-pU"pI,

13: pU"pI,

14: YEE(ahGaINAc),-SMCC-AET-pU"pI,

15: YEE(ahGalNAc),-SMCC-AET-pU"

9

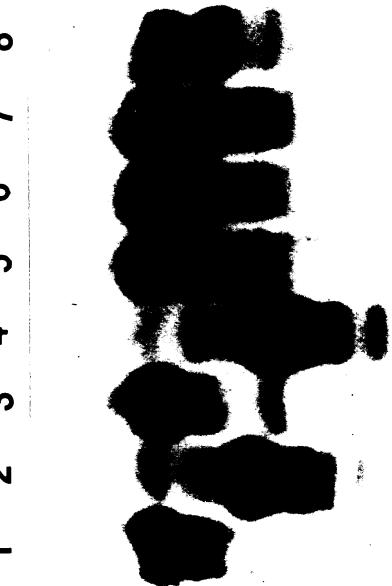
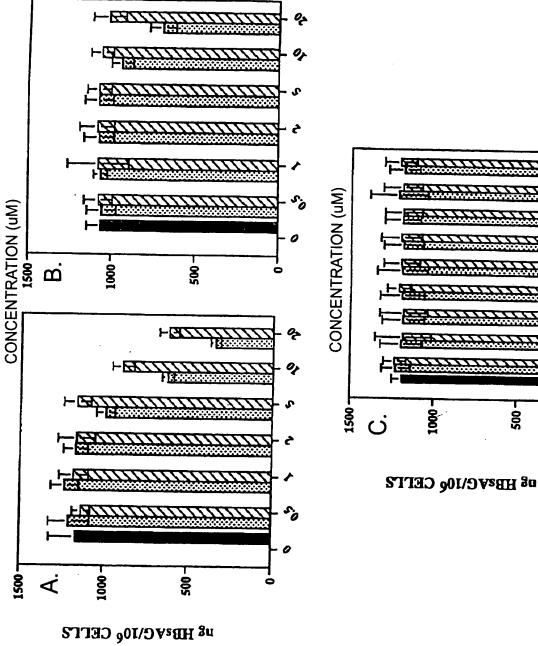


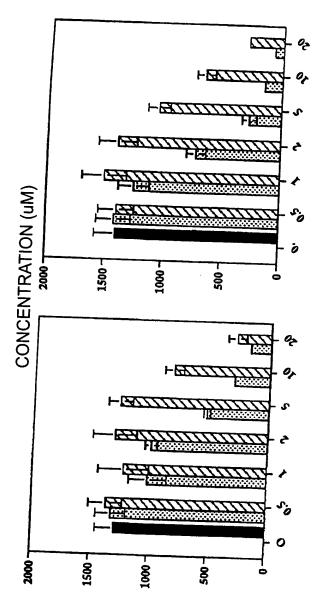
FIG. 17

1500 J

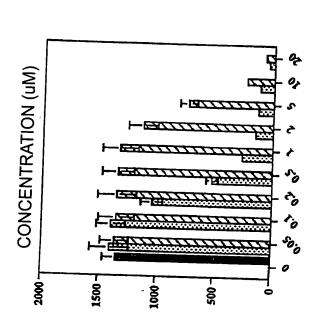


- 009

FIG 19



DE HBA AIBTON DNY100 CEFF?



PE HBY VIRION DNA/106 CELLS

